

Serial No.: 09/857,424

IN THE CLAIMS:

1. (Previously Presented) A light-emitting device, comprising:

an anode and a cathode having an emission region therebetween,

wherein the emission region comprises material contributable to emission and a medium for containing the material, wherein the material contributable to the emission has a substantially successive distribution of concentration from the anode side of the emission region toward the cathode side thereof, and

wherein a part of the emission region that exhibits a maximum concentration of the material contributable to the emission is away from the anode and the cathode.

2. (Cancelled)

3. (Original) The light-emitting device as set forth in Claim 1, wherein the emission region further comprises charge transport material.

Serial No.: 09/857,424

4. (Original) The light-emitting device as set forth in Claim 3, wherein the charge transport material has a substantially successive distribution of concentration from the anode side of the emission region toward the cathode side thereof.

5. (Previously Presented) A light-emitting device, comprising:

an anode and a cathode having a charge transport region therebetween,

wherein the charge transport region comprises charge transport material and a medium for containing the charge transport material wherein the charge transport material has a substantially successive distribution of concentration from the cathode side of the charge transport region toward the anode side thereof, and

wherein a part of the charge transport region that exhibits a maximum concentration of the charge transport material is away from the anode and the cathode.

Serial No.: 09/857,424

6. (Previously Presented) The light-emitting device as set forth in Claim 1, wherein the emission region comprises, at the side of the emission region near the anode or the cathode, a region where the material contributable to the emission is not present.

7. (Cancelled)

8. (Previously Presented) The light-emitting device as set forth in Claim 5, wherein the charge transport region comprises, at the side of the emission region near the anode or the cathode, a region where the charge transport material is not present.

9. (Cancelled)

10. (Previously Presented) A lighting device comprising in combination therewith the light-emitting device as set forth in Claim 1.

Serial No.: 09/857,424

11. (Previously Presented) A light-emitting device, comprising:

an anode and a cathode having an emission region therebetween,

wherein the emission region comprises material contributable to emission and a medium for containing the material, and

wherein the material contributable to the emission has a distribution of concentration that reduces substantially successively in a direction parallel to a surface of the cathode and a surface of the anode from a substantially center of the emission region toward a periphery thereof.

12. (Currently Amended) The light-emitting device as set forth in Claim 11, ~~further comprising~~ wherein said material contributable to emission is a plurality of materials contributable to emission ~~are~~ adjacently arranged in a direction parallel to a surface of the cathode and a surface of the anode, wherein each of the plurality of materials contributable to

Serial No.: 09/857,424

emission is different in luminous color from others of said plurality of materials.

13. (Original) The light-emitting device as set forth in Claim 11, wherein the emission region further comprises charge transport material.

14. (Original) The light-emitting device as set forth in Claim 13, wherein the charge transport material has a distribution of concentration that reduces in the direction parallel to the surface of the cathode and the surface of the anode from the substantially center of the emission region toward the periphery thereof.

15. (Original) The light-emitting device as set forth in Claim 11, wherein the material contributable to the emission has a substantially successive distribution of concentration from the cathode side of the emission region toward the anode side thereof.

Serial No.: 09/857,424

16. (Original) The light-emitting device as set forth in Claim 14, wherein the charge transport material has a substantially successive distribution of concentration from the cathode side of the emission region toward the anode side thereof.

17. (Original) The light-emitting device as set forth in Claim 11, wherein the emission region includes a region where the material contributable to the emission is not present.

18. (Original) The light-emitting device as set forth in Claim 11, wherein the medium for containing the material contributable to the emission has charge transport capabilities.

19. (Original) The light-emitting device as set forth in Claim 11, wherein the medium for containing the material contributable to the emission comprises organic material.

20. (Previously Presented) The light-emitting device as set forth in Claim 11, wherein the medium comprises a polymer.

Serial No.: 09/857,424

21. (Previously Presented) A display comprising in combination therewith the light-emitting device as set forth in Claim 11.

22.-27. (Cancelled)

28. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 24, wherein said containing comprises penetrating the material contributable to the emission and the charge transport material into the medium, so that said materials are contained in the medium.

29. (Cancelled)

30. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 24, wherein said containing comprises bringing a solution comprising the material contributable to the emission and the charge transport material

Serial No.: 09/857,424

dissolved in solvent into contact with the medium, so that the materials are penetrated into the medium.

31.-32. (Cancelled)

33. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having an emission region ~~an anode and a cathode~~ therebetween,

wherein the emission region comprises material contributable to emission and a medium comprising organic material for containing the material,

wherein at least one of an anode side of the emission region and a cathode side thereof is ~~made~~ porous, and

wherein the material contributable to emission is collected and included in a surface of the emission region which is ~~made~~ porous.



Serial No.: 09/857,424

34. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having an emission region ~~an anode and a cathode~~ therebetween,

wherein the emission region comprises material contributable to emission and a medium comprising organic material for containing the material,

wherein at least one of an anode side of the emission region and a cathode side thereof is ~~made~~porous, and

wherein the material contributable to emission is collected and included in a region in the vicinity of a surface of the emission region which is ~~made~~porous.

35. (Currently Amended) The light-emitting device as set forth in Claim 33, wherein charge transport material is included in a surface of the emission region which ~~has been made~~ is porous.

Serial No.: 09/857,424

36. (Currently Amended) The light-emitting device as set forth in Claim 33, wherein a leveled layer comprising charge transport material ~~has been provided~~ is located on a surface of the emission region which is ~~made porous~~.

37. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having a charge transport region an ~~anode and a cathode therebetween,~~

wherein the ~~emission~~ charge transport region comprises material contributable to emission and a medium comprising organic material for containing the material, and

wherein at least one of an anode side of the charge transport region and a cathode side thereof is ~~made porous~~.

38. (Original) The light-emitting device as set forth in Claim 37, wherein the charge transport region is a hole transport region.

Serial No.: 09/857,424

39. (Original) The light-emitting device as set forth in Claim 37, wherein the charge transport region is an electron transport region.

40. (Cancelled)

41. (Previously Presented) The light-emitting device as set forth in Claim 33, wherein the emission region comprises a polymer.

42. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having an emission region ~~an anode and a cathode therebetween,~~

wherein the emission region comprises material contributable to emission and a medium comprising organic material for containing the material,

wherein at least one of an anode side of the emission region and a cathode side thereof is a roughened side, and

Serial No.: 09/857,424

wherein the material contributable to emission is collected and included in a surface of the roughened emission region.

43. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having an emission region ~~an anode and a cathode~~ therebetween,

wherein the emission region comprises material contributable to emission and a medium comprising organic material for containing the material,

wherein at least one of an anode side of the emission region and a cathode side thereof is a roughened side, and

wherein the material contributable to emission is collected and included in a region in the vicinity of a roughened surface of the emission region.

44. (Original) The light-emitting device as set forth in Claim 42, wherein a leveled layer comprising charge transport material is provided on a roughened surface of the emission region.

Serial No.: 09/857,424

45. (Currently Amended) A light-emitting device, comprising:

an anode and a cathode having a charge transport region an ~~anode and a cathode therebetween,~~

wherein the ~~emission~~ charge transport region comprises material contributable to emission and a medium comprising organic material for containing the material, and

wherein at least one of an anode side of the charge transport region and a cathode side thereof is a roughened side.

46. (Original) The light-emitting device as set forth in Claim 45, wherein the charge transport region is a hole transport region.

47. (Original) The light-emitting device as set forth in Claim 45, wherein the charge transport region is an electron transport region.

48. (Cancelled)

Serial No.: 09/857,424

49. (Previously Presented) The light-emitting device as set forth in Claim 42, wherein the emission region comprises a polymer.

50. (Previously Presented) A display comprising in combination therewith the light-emitting device as set forth in Claim 33.

51. (Previously Presented) A lighting device comprising in combination therewith the light-emitting device as set forth in Claim 33.

52. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an ~~an~~ the anode or a ~~the~~ cathode; and

making at least a part of the medium comprising organic material porous.

Serial No.: 09/857,424

53. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an—the anode or a—the cathode;

making at least one of an anode side of the medium comprising organic material and a cathode side thereof porous; and

locating material contributable to emission on a porous surface of the medium comprising organic material, so that the emission region is formed by the medium and the material contributable to the emission.

54. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an—the anode or a—the cathode;

Serial No.: 09/857,424

making at least one of an anode side of the medium comprising organic material and a cathode side thereof porous;

containing material contributable to emission in a region in the vicinity of a porous surface of the medium comprising organic material, so that the emission region is formed by the medium and the material contributable to the emission; and

locating charge transport material on a porous surface of the medium.

55. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 53, further comprising locating charge transport material on a porous surface of the emission region.

56. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 53, further comprising forming a leveled layer comprising charge transport material on the emission region.



Serial No.: 09/857,424

57. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 53, comprising locating a medium containing material soluble in a specified solvent, and eluting the soluble material from the solvent to thereby make the medium porous.

58. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an ~~an~~ the anode or a the cathode; and

roughening a part of the medium comprising organic material.

59. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an ~~an~~ the anode or a the cathode;

Serial No.: 09/857,424

roughening at least one of an anode side of the medium comprising organic material and a cathode side thereof; and

locating material contributable to emission on a roughened surface of the medium comprising organic material, so that the emission region is formed by the medium and the material contributable to the emission.

60. (Currently Amended) A method of producing a light-emitting device having an emission region between an anode and a cathode, the method comprising:

locating a medium comprising organic material on an ~~an~~the anode or a ~~the~~cathode;

roughening at least one of an anode side of the medium comprising organic material and a cathode side thereof; and

containing material contributable to emission in a region in the vicinity of a roughened surface of the medium comprising organic material, so that the emission region is formed by the medium and the material contributable to the emission.

Serial No.: 09/857,424

61. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 59, further comprising forming a leveled layer comprising charge transport material on the emission region.

62. (Previously Presented) The method of producing a light-emitting device as set forth in Claim 59, comprising roughening the emission region by dry etching.